Tonopah Test Range water report

Source Water

The Tonopah Test Range, Mancamp Public Water System is operated by Cabaco, Inc. Water comes from two wells that are recharged from ground water aquifers. The BLM well is located on Main Road, northwest of the Mancamp and well EH-7 is located on Perimeter Patrol Road, southwest of the Mancamp.

The Mancamp currently has monitoring waivers for certain chemical contaminants regulated by the Environmental Protection Agency (EPA). A monitoring waiver means that the Mancamp does not have to test the water for these contaminants at the frequency required by the EPA.

In order to receive a waiver, the Nevada State Health Division conducted a vulnerability assessment. The assessment established that the water system is unlikely to be contaminated by these chemicals based on a study of 1) the geology of the area; 2) past and current land use; and 3) the existence of potential sources of contamination. For details about the specific chemicals for which there are monitoring waivers, please call Bioenvironmental Engineering Flight at (702) 653-3316.

Treatment Process

Because Mancamp's water supply is a protected ground water source, it does not require the level of treatment associated with surface water sources. Once pumped from the ground, the water is disinfected using chlorine.

Testing

Every month, Cabaco personnel collect water samples from Mancamp's water supply and send them to Nevada Environmental Laboratories (NEL) for analysis. The results are reviewed and maintained by Bioenvironmental Engineering Flight at Nellis AFB to ensure compliance with the Safe Drinking Water Act.

Primary Water Analysis Results

Mancamp's water supply is tested for more than 100 substances, but only those that were detected are listed in the "Test Results" table. EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

·Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems and wildlife.

·Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff and industrial or domestic wastewater discharges.

·Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential use.

·Organic chemical contaminants, including synthetic or volatile organic chemicals, which are byproducts of industrial processes and can come from gas stations, urban storm water runoff and septic systems.

·Radioactive contaminants, which can be naturally occurring or be the result of industrial activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

Additional Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, who have undergone organ transplants, with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA and Center for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

Violations

The Mancamp public water system had no violations of the Safe Drinking Water Act standards in 1999.

Input and Information

This report will not be mailed to consumers. If you would like a copy or have questions, please contact Air Warfare Center Office of Public Affairs, Mr. Michael Estrada or Tech. Sgt. Richard Covington, at (702) 652-2750 or 1-800-859-3804. Questions can also be mailed to AWFC/PA, 4370 N. Washington Blvd., suite 223, Nellis AFB, NV 89191-7078.

The EPA's Safe Drinking Water Hotline can be reached at (800) 426-4791.

TEST RESULTS: All data is based upon 1999 analysis, except in the case of contaminants for which annual testing is not required.

SUBSTANCE	RANGE	AVERAGE	MCL (EPA LIMIT)	MCLG (EPA GOAL)	Possible Source
Arsenic	29 ppb	29 ppb	50 ppb	N/A	Erosion of natural deposits
Barium	0.019 ppm	0.019 ppm	2 ppm	2 ppm	Drilling waste, erosion of natural deposits
Fluoride	1.3 – 1.4 ppm	1.4 ppm	4 ppm	4 ppm	Erosion of natural deposits
Nitrate	1.4 – 1.7 ppm	1.6 ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Selenium	2 ppb	2 ppb	50 ppb	50 ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Lead	ND (90^{th} percentile)	N/A	15 ppb*	50 ppb	Corrosion of household plumbing systems; erosion of natural deposits
Copper	0.017 ppm (90^{th} percentile)	N/A	1.3 ppm*	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Gross Alpha Activity (1997)	0.9 – 3.2 pCi/	2.3 pCi/L	15 pCi/L	0 pCi/L	Erosion of natural deposits; decay of man-made deposits
Gross Beta Activity (1997)	6.3 – 14 pCi/	10.8 pCi/L	50 pCi/L**	0 pCi/L	Erosion of natural deposits; decay of man-made deposits
Total Coliforms	0 Positive (samples/ month)	N/A	1 Positive (samples/ month)	0 Positive	Naturally present in the environment
Sulfate (Unregulated)	36 – 38 ppm	37 ppm	N/A	N/A	Erosion of natural deposits
Sodium (Unregulated)	64 – 85 ppm	75 ppm	N/A	N/A	Erosion of natural deposits

* Action level: 90% of samples taken must be below this amount
** The actual MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles

Important Definitions

Maximum contaminant level goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum contaminant level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Action level – The concentration, which, if exceeded, triggers a treatment, or other requirement, which a water system must follow.

ppb – Part per billion – A unit used to describe the levels of detected contaminants. Equivalent to about 1 dissolved aspirin tablet in a 100,000 gallon (25 meter) swimming pool.

ppm – Part per million - A unit used to describe the levels of detected contaminants. Equivalent to about ½ of a dissolved aspirin tablet in a full bathtub of water (about 50 gallons)

pCi/L – Picocuries per liter - a measure of radioactivity in water. Low levels of radiation occur naturally in many water systems, including the Colorado River.

ND – Not detected